Cider PRESS

San Francisco Apple Core

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GENERAL MEETINGS:

APRIL 16

MAY 21

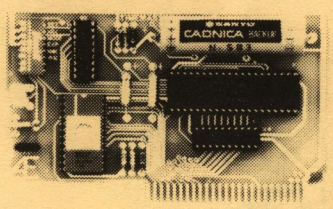
JUNE 18

APRIL, 1983

Apple Peripherals Are All We Make

That's Why We're So Good At It!

The TIMEMASTER
Finally, a clock that does it ALL!



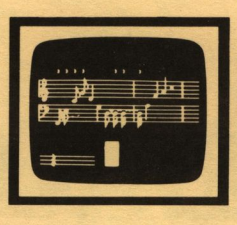
- Designed in 1983 using I.C. technologies that simply did not exist when most other Apple clocks were designed.
- Just plug it in and your programs can read the year, month, date, day, and time — down to 1 millisecond!
- Powerful 2K ROM driver — No clock could be easier to use.
- Full emulation of most other clocks, including Mountain Hardware's Appleclock (but you'll like the TIMEMASTER mode better).
- Compatible with all of Apple's languages, CP/M and PASCAL software on disk.
- Eight software controlled interrupts so you can execute two programs at the same time.
- On board timer lets you time any interval up to 48 days long down to the nearest millisecond.

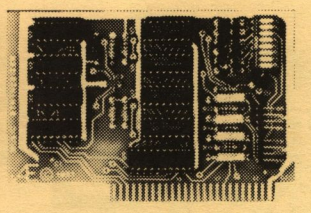
The TIMEMASTER includes a disk with some really fantastic time oriented programs (over 25) plus a DOS dater so it will automatically add the date when disk files are created or modified. This disk is over a $200.00 value alone — we give the software others sell. All software packages for business, data base management and communications are made to read the TIMEMASTER.

If you want the most powerful and the easiest to use clock for your Apple, you want a TIMEMASTER.

PRICE $129.00

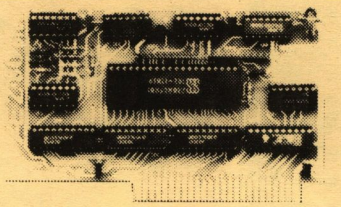
Super Music Synthesizer





- Complete 16 voice music synthesizer on one card. Just plug it into your Apple, connect the audio cable (supplied) to your stereo, boot the disk supplied and you are ready to input and play songs.
- It's easy to program music with our compose software. You will start right away at inputting your favorite songs. The Hi-Res screen shows what you have entered in standard sheet music format.
- We give you lots of software. In addition to Compose and Play programs, the disk is filled with songs ready to play.
- Easy to program in Basic to generate complex sound effects.
- Four white noise generators which are great for sound effects.
- Plays music in true stereo as well as true discrete quadraphonic.
- Full envelope control.
- Will play songs written for ALF synthesizer (ALF software will not take advantage of all the features of this board. Their software sounds the same in our synthesizer.)
- Automatic shutoff on power-up or if reset is pushed.
- Many many more features.

PRICE $159.00



Z-80 PLUS!

- An on-card PROM eliminates many I.C.'s for a cooler, less power consuming board. (We use the Z-80A at a fast 3.58 MHZ)
- Does EVERYTHING the other Z-80 boards do, plus Z-80 interrupts.
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- Executes the full Z-80 and 8080 instruction set.
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- 8 Channels
- 8 Bit Resolution
- On Board Memory
- Fast Conversion (.078 ms per channel)
- Eliminates the Need to Wait for A/D Conversion (just PEEK at data)
- A/D Process Totally Transparent to Apple (looks like memory)

The analog to digital conversion takes place on a continuous, channel sequencing basis. Data is automatically transferred to on board memory at the end of each conversion. No A/D converter could be easier to use.

Our A/D board comes standard with 0, 10V full scale inputs. These inputs can be changed by the user to 0, -10V, or -5V, +5V or other ranges as needed.

Information on temperature sensors is given in manual.
The user connector has +12 and -12 volts on it so you can power your sensors.

Accuracy 0.3% Input Resistance 20K Ohms Typ

A few applications may include monitoring and control of ● flow ● temperature ● humidity ● wind speed ● wind direction ● light intensity ● pressure ● RPM ● storage oscilloscope ● soil moisture and many more.

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- Provides 8 buffered outputs to a standard 16 pin socket for standard dip ribbon cable connection.
- Power-up reset assures that all outputs are off when your Apple is turned on.
- Features 8 inputs that can be driven from TTL logic or any 5 volt source.
- Your inputs can be anything from high speed logic to simple switches.
- Very simple to program, just PEEK at the data.
- Now, on one card, you can have 8 digital outputs and 8 digital inputs each with its own connector. The super input/output board is your best choice for any control application.

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Michael Fischer	415/933-4435
Gary Knox	415/521-0603
Stepehn C. Lloyd	415/222-5860
Don Scellato	415/672-2051
Alan L. Smerican	415/566-2342

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Treasurer	Gary Knox	415/521-0603
Coordinating Dir.	Joyce Conklin	415/341-6955

In a recent Cider Press, we noted that there seemed to be some question about the Applefests, their continuation, or their management. We're happy to report that such differences, if any, have been worked out, and there will be Applefests in Anaheim, Boston, and San Francisco. The early information is that these will be good shows, and we're looking forward to participating in the San Francisco affair.

Peter C. Weiglin

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Article Submission: The CIDER PRESS welcomes any and all articles dealing with Apple computers and their associated hardware and software. Articles may be submitted (typed or printed, double - space), or as disk text files using any of the popular word processors or text editors. Any author who has an article published in the CIDER PRESS will receive a free copy of the most current Disk - of - the - Month.

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San Francisco Apple Core
1515 Sloat Blvd.
San Francisco, CA 94132

THE BOARD OF DIRECTORS REPORTS...

Following the announcement of the election results at the General meeting at Fort Mason on 19 Mar. 1983, the new directors met to discuss the organization of the board for the coming year. Each director will have an area of responsibility concerning the operation of the club. If you have any questions or suggestions, please contact the appropriate director.

Membership:	Alan Smerican
415-556-2342	
Executive Secty:	Steve Lloyd
415-571-7370	
Treasurer:	Gary Knox 415-521-0630
Marketing:	Don Scellato
415-672-2051	
Monthly Gen mtg:	Mike Fischer
415-933-4435	
Education/Int grps:	Sami Capron
415-388-8631	
Coord Director:	Joyce Conklin
415-341-6955	

You will see that there are some reports from these directors already in this Cider Press; we hope to have more of these, so that the members will be aware of activities, as well as of upcoming events. The general meeting dates for the remainder of the year (for those of you who like to plan ahead) are as follows:

Apr. 16	Sep. 17
May 21	Oct. 15
Jun. 18	Nov. 19
Jul. 9***	Dec. 17
Aug. 20	

The July meeting is moved because Fort Mason is planning asbestos removal in Building C during the final three weeks of July this year. Other than that, the meetings are scheduled for the third Saturday of each month. The caveat ALWAYS applies, however; keep your calendar at the ready, in case some other outside event forces a change of plans. The Applefest is currently scheduled for the 28-30 of Oct. (see article elsewhere in the Cider Press) so we won't have a conflict between the general meeting date and a big fair, as we did this past month. I was glad to see as many people show up for the general meeting as did; we hope that even more will be at the April meeting. Incidentally, for those of you who REALLY plan ahead, the 9th West Coast Computer Faire is scheduled for 16-18 March 1984!

Gene Wilson has resigned as Cider Press Editor. We thank Gene for all his hard work the last year producing the Cider Press and congragulation him on the birth of his son.

Allan Woods has been selected as acting editor of the Cider Press.

Joyce Conklin

INTERNATIONAL APPLE CORE ™

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PROGRAMMING CONTEST UPDATE
by
Don Scellato

The entry blanks for the programming contest described in the last issue of the Cider Press are now available at the Clubhouse. Any member wishing to enter a program in the contest should write to the Clubhouse requesting entry forms, or should call the Clubhouse or go there for forms. Remember, only members may enter. Forms will also be made available at the meeting on April 16.
The Contest Librarian and Board Members have been actively soliciting prizes from various sources. The following companies have become Contest Sponsors by contributing prizes:

1. ARTSCI, Inc., 5547 Satsuma Avenue, North Hollywood, Ca., publishers of Magic Window, has contributed two prizes to the SFAC for the programming contest. The products contributed are Magic Window II, a 40 column/70 column/80 column Word Processor, and Magicalc, a very powerful and flexible electronic spreadsheet. We will list the category in which these prizes will be awarded when all of the prizes have been received. The San Francisco Apple Core thanks ARTSCI, Inc. for their generous support in our effort to encourage member programming.

2. The International Apple Core, Apple Orchard, 910A George Street, Santa Clara, Ca., has declared that it will give to each contest entrant a free one year subscription to the Apple Orchard, The Premier Magazine for Apple Computer Users. Any entrant who already subscribes to this magazine will receive an extension to his subscription. The SFAC thanks the Editor and Publisher for his support and encouragement with the contest.

3. Software Publishing Corporation, 1901 Landings Mountain Drive, Mountain View, Ca., has contributed a copy of PFS GRAPH to the club for use as a prize in the programming contest. This program is a very useful graphing tool which allows the user to access files from PFS:FILE or Visicalc. It also accepts data entry from the user and provides him with a variety of graphs. The SFAC thanks Software Publishing Corporation for their continuing support.

4. Roger Wagner of Southwestern Data Systems, P.O. Box 582, Santee, Ca., has kindly contributed a copy of The Routine Machine to the Club for use as a contest prize. This programming utility gives the user the ability to access the power and speed of machine language routines in Applesoft programs. High Resolution graphics and sound are placed at the users fingertips in a cconvenient fashion through this program.

A number of other firms have been approached regarding donating prizes for the contest. All of these firms have indicated a willingness to consider donating prizes but have not yet committed. When they do we will ad their names to the list of Contest Sponsors listed above. In the meantime, the SFAC is most fortunate to receive the support already provided by the companies listed above. I'm sure the memebrship of the Club joins the Program Librarian and the Board of Directors in extending or thanks.

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Quentin	279.00
Apple	340.00
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Elephant ss/dd	24.00
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(415) 843-2743
at Telegraph

Interest Groups

CPM

For those members interested in learning about Apple CPM there is an interest group in Marin led by Jim Ayers. The group meets at 411 Ash St., Mill Valley, the second and fourth Tuesday of the month at 7:30 p.m. Jim reports that the meetings are generally question and answer sessions and that there is no formal structure to the meeting.

East Bay

Molly Mitchell and Leonard Leff are co-leaders of the East Bay Group which meets at 766-4th St., Oakland, at 7:30 p.m. on the first Tuesday of the month. This unstructured group is generally for those memers interested in exchanging general information about their Apples.

Forth

Dudley Ackerman leads an informal meeting regarding the Forth language on the first and third Tuesday of the month at 7:30 p.m. at the Clubhouse. Dudley welcomes anyone interested in Forth, a powerful and efficient language.

Apple ///ers

The Apple /// interest group led by Don Norris meets at the California Bar Association at 555 Franklin St., San Francisco on the third Wednesday of each month at 7:30 p.m. The group regularly has product and software demonstrations and lots of good information is exchanged.

Green Apples

Gary Owens teaches a beginners BASIC class every Thursday except the second Thursday and the Thursday before a general meeting. Meetings are at 8 p.m. at the Clubhouse. His class is recycled about every 4 months. The current class started in March. If you are interested in the next class, call Gary at home.

Marin Graphics

Reed Harris indicates he is interested in starting a graphics group in marin. If interested contact him at 924-5448.

ETC. . .

Group leaders are wanted for Assembly language, Communications, and tax preparation groups. If you are interested in these positions, or in any other new interest groups, please contact Sami Capron at 388-8631.

VISICALC INTEREST GROUP
by
Don Scellato

The Visicalc Interest Group meets on the second Tuesday of each month at 7:30 PM at the Clubhouse. Its meetings are usually attended by a variety of new and experienced users of the Electronic Spreadsheet program. Time is now devoted to the needs of each type of attendee. A portion of the meeting is devoted to demonstrating a particular feature of the program for the new users. Other portions of the meeting are devoted to solving problems encountered by both new and experienced users. It is not a class but if you wish to receive an overview of the program or have a specific feature explained, please come to the meetings, introduce yourself, and tell us how we can help you.

The March meeting was held on March 8. We asked Gary Knox to explain and demonstrate The Worksheet Consolidator program which he donated to the Club. He spent as much time as was needed to show how the program operates. The group then took a quick look at Basicalc which is a listable Visicalc lookalike available from the IAC on one of their recently released disks.

The next meeting will be held on April 12 at 7:30 PM. We will be glad to help any new users with their problems. We will then spend some time examining The Spreadsheet which is being sold by A.P.P.L.E. (Puget Sound Users Group). In later meetings we will be examining such other CALC programs as may be available and comparing these programs with Visicalc. A portion of each meeting will also be devoted to gaining more knowledge about Visicalc and its applications. We hope to see you there.

The Epson Printer Interest Group meets on the fourth Tuesday of each month at the clubhouse (1515 Sloat Blvd.). Meetings begin about 7:30 p.m. and usually last until 9 or 9:30 p.m.

We have discussed many items of interest to Epson printer owners. We have reviewed various hires graphics screen dump programs. (A "screen dump" is a program which transfers the image on your monitor or television screen to your printer. A hires graphics dump transfers a hires graphics picture; a lores graphics dump transfers a lores graphics picutre; a text dump transfers text.)

Other topics covered have been the various codes which turn on and off the Epson printer functions such as enhanced, double-strike, enlarged, condensed, and italic

printing. We have also learned to set vertical and horizontal line spacing, access the block graphics set, and do underlining.

Group members have provided various utilities such as a lores graphics dump, a text dump which works with any standard Applesoft program or from the Applesoft command level, and various programs which set or clear printer functions or print disk labels. We are also working on a program to make large block letter fonts and print them using Epson block graphics.

All club members are welcome at our sessions. Beginners with questions or problems are especially welcome.

Each month's meeting is based on the desires, interests, and questions of those in attendance. For example, last month (March) we discussed how the large print headlines in the Cider Press are created, how to set various print functions from within Visicalc, and the sources of the three different line feeds which affect printer line spacing.

Future topics, some of which may be explored at the April meeting (April 26 at 7:30 p.m.) include printer output formatting (how to get those decimals to line up evenly in columns), "pretty-printing" listings (printing an Applesoft program listing with indented for-next loops and if-then commands, page headings, and numbered pages), and color printing with an Epson (yes, it is possible).

We also share information about printer enhancements (MX-Plus, Graftrax-Plus, Printer Buffers), supplies (paper, ribbon cartridges, and reloads) and manuals (Epson and The Other Epson Manual). All flavors and varieties of Epsons are welcome (MX-70, MX-80, MX-100, FX-80, with or without Graftrax or Graftrax-Plus, any type of interface cards, with or without friction feed).

For further information call the group leader, Michael Fischer, at (415) 933-4435 (evenings) or (415) 557-1250 (days).

```
########################################
#                                      #
#          AUTHORS WANTED              #
#                                      #
#  Share your experiences, Apple       #
#  programming hints,pascal tips,      #
#  software reviews. Send your         #
#  material to the Cider Press         #
#  Editor at the Clubhouse.....        #
#                                      #
########################################
```

The Nu'ers Interest Group
by Sami Capron

What's that?

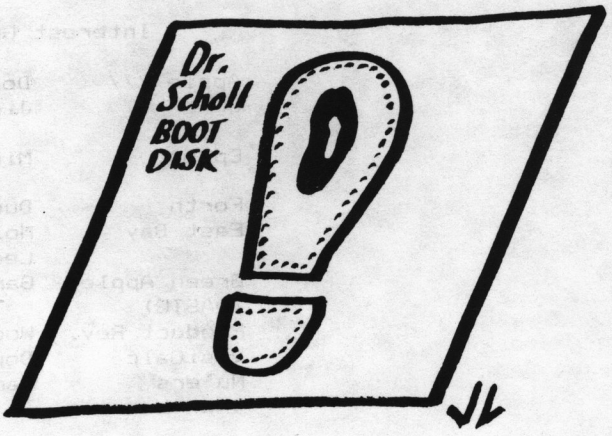
Well, the Nu'ers is an abbreviation for the New Users Group. This is not a new group, but rather a revitalized one. It is designed to give the new user an opportunity to learn, in a semi-structured learning situation, how to better use their Apple.

The plan at this time is to provide classes that will be recycled about every 6 months. A new club member (or old club member) may come to any meeting and not feel lost in terms of the information provided.

We will have guest speakers on various topics such as how to use a printer, how the disk system functions, how graphics work, what the peeks, pokes and calls are and what they do, what and why are Pascal and CPM, and much more. As a matter of fact, I am soliciting suggestions for the curriculum at this time. If you have any ideas please call me. Also, if you have any expertise that you think would interest a new user and would like to give a talk on the subject, let me know ASAP. Please don't be modest, we need you.

The first Nu'ers group will meet at Guinness Productions, 55 Main Street, Tiburon, on May 10 at 7:30 p.m., sharp. Come listen to Mike Fischer talk on "An Introduction to Your Apple; or What the Dealer Won't (or Can't) Tell You and the Manuals Garble."

Remember, May 10 at 7:30 p.m. in Marvelous Marin. Any questions, give me a call at 388-8631.



APRIL 1983

TUESDAY	WEDNESDAY	THURSDAY
5 East Bay 7:30 Forth 7:30	6 Board of Directors 7:00	7 Green Apples 8:00
12 CP/M 7:30 VisiCalc 7:30		
19 Forth 7:30	20 Apple /// 7:30	
26 CP/M 7:30 Epson 7:30		28 Green Apples 8:00

MAY 1983

3 East Bay 7:30 Forth 7:30		5 Green Apples 8:00
10 CP/M 7:30 VisiCalc 7:30 Nu'ers 7:30	11 Board of Directors 7:00	
17 Forth 7:30	18 Apple /// 7:30	
24 CP/M 7:30 Epson 7:30		26 Green Apples 8:00

Interest Group Leaders

Apple ///	Don Norris	673-7635 day
CP/M	Jim Ayers	383-0473 day 383-5759 eve
Epson	Michael Fischer	557-1250 day 933-4435 eve
Forth	Dudley Ackerman	626-6295
East Bay	Molly Mitchell Leonard Leff	526-9541
Green Apples (BASIC)	Gary Owens	521-4002
Product Rev.	Woody Liswood	585-6375
VisiCalc	Don Scellato	672-2051 eve
Nu'ers (New Users)	Sami Capron	388-8631

B*A*S*I*C

(c) 1983 by Joyce Conklin

The winner of the Hidden Bug of the Month contest (you didn't think that was a plain, ordinary mistake, did you?) is Michael Fischer. He points out that the two examples in the beginning of the March column don't match. The initial illustration of the syntax for a DIMension statement shows DIM D(13,4) but the short routine at the bottom of the column to set the array to zero's causes the clearing to be done in the opposite order. What it should show is this:

```
 5 DIM D (13,4)
10 FOR S = 1 TO 13
20 FOR R = 1 TO 4
30 D (S,R) = 0
40 NEXT R
50 NEXT S
```

Notice that the first argument in the DIMension statement is 13, the second is 4. Therefore, the order of the variables in line 30 MUST match the order given in the DIMension statement, which requires the reversal of the values of S and R from those given in the March issue.

The calendar didn't completely cooperate with my need for time to revise the poker game to which I referred last month. As I write this column for inclusion in the Cider Press (later this afternoon!), it is only the first day of Spring vacation, and I haven't had the heart to keep telling the students that I didn't grade their papers because I was playing cards!! I have also decided that translating a program, plus cleaning up the beginners' logic (sic) that existed, is more difficult that writing another program from scratch, which I will attempt to do this week and have it ready for the May issue. That brings to mind an idea which I should share with those of you who are serious about writing your own programs. I hear that "flow-charting" is no longer being emphasized in programming classes, and I will be the first to admit that in my beginning class I wrote the code first and drew the flow-chart to fit. But I now find that doing a flow-chart first, whether in symbols or in words, is invaluable in planning what you want to do in the most efficient way. There is one book on flow-charting which I have found (FLOWCHARTING: A Tool for Understanding Computer Logic, by Nancy Sterns; publ. by John Wiley and Sons) but it does have a 1975 (!!) copyright date and therefore the examples pertain to business applications and mainframe or at most minicomputer programs, mostly written in COBOL. If you realize that it is no longer necessary to move infomation to a special location (within the computer) before it can be printed out in hard-copy, then the explanations are very useful, and the practice in thinking ahead is invaluable. When I give my computer classes an assignment to design a program, regardless of how "easy" it may seem on the surface, I go over the details and each time there is a required "move" on the part of the programmer, we write that on the board. Then, after all the steps are listed on the board, we try to put them in order so that the final program will produce the output required. Pretend, for a while, that you are back in school (no, no - don't run away!) and I'll show you what I mean. After all, the biggest hang-up for many people in learning how to program is that ALL of the problems are WORD PROBLEMS, and you remember what fun you used to have with the coffee problems or fill-and-drain problems in your algebra class! (What? You didn't have Mr. Smith (or maybe Mrs. Olson) with his/her two kinds of coffee, one at $0.45/1b and one at $0.57/1b - now you know when I went to school! - and he wants to sell a mix at 2 1b/$1.05; what proportion of each should he use?)

Anyway, the latest problem which I gave to my students was the following, which taught READ/DATA, GOTO, IF-THEN,and other topics like PRINT, etc. which we had used previously. The problem was presented as shown below.

COMPUTER 1
Assignment #2 TEMPERATURE CONVERSION

DATA: Pairs of consecutive digits chosen from your social security number. For example, the S.Sec. number 342-56-0871 yields data numbers of 34, 42, 25, 56, 60, 08, 87, and 71.
PROGRAM: Generate a Celsius-Fahrenheit conversion table. Each of the numbers from your data list is to be converted to a Celsius equivalent (as if it were Fahrenheit to start with) and to a Fahrenheit equivalent (as if it were Celsius to start with). The conversion formulae are as follows:

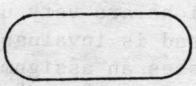
```
F = (9/5)*C + 32
C = (5/9)*(F-32)
```

OUTPUT FORMAT: You should have a table which will appear on the screen when the program is run which will have the following information:

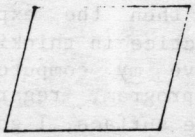
(Continued on next page...)

-->Printed Heading:
CELSIUS-FAHRENHEIT CONVERSION TABLE
-->Three column headers: C, F/C, and F
--> The numbers from the data (under the heading "F/C") and the results from the calculations (under the "C" for Celsius and under the "F" for Fahrenheit)

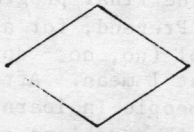
The students had previously been given an abbreviated set of flow-charting symbols to use. They are originally from the IBM flow-chart template (available in your local college bookstore, most likely), and are as follows:



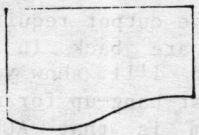
TERMINAL
(Start/End)



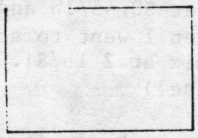
INPUT/OUTPUT
(Read)



DECISION
(If-Then)

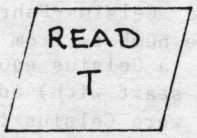


PRINT



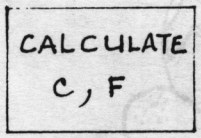
PROCESS

O.K. class, now let's start at the beginning. The first paragraph is titled "Data" so we know that we have to READ some data, somewhere in the program.

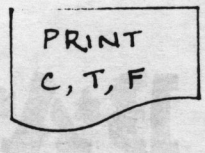


Next, it says that we need a table, which tells us that the output will consist of columns of figures. There is no flow-chart symbol for "table" so we'll just make a series of lines to remind us.

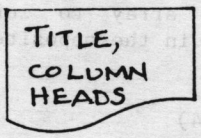
We have two conversion formulae so we will have to make some calculations, somewhere in the program. Incidentally, notice that the words inside the symbols are 'notes' to us, not coding for the computer.



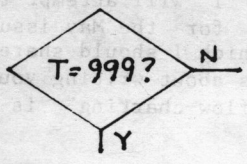
Now the computer knows what the answers are, but in order for the program to be useful, the answers must be printed out as well, so we need that step. (We'll worry about the exact format later on.)



The "Output Format" says that we need a title and some column headers, so we will indicate those using a PRINT symbol. My preference is to use this symbol wherever output is called for, whether it is to be on the screen or on hard-copy. Obviously the origin of the symbol is from hard-copy, as it represents a piece of paper torn off at the bottom. Some people use the parallelogram for both input AND output; I use it only for INPUT or READ.

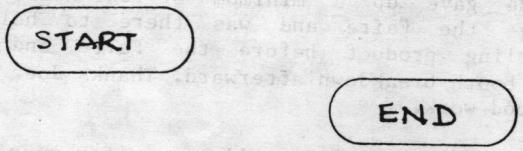


When you are using READ/DATA, there must be some way for the computer to know when to quit. The computer knows which item in the DATA set to read because there is a "pointer" (electronic of course, not physical). At the beginning of the program the pointer is at the first item in the first DATA line of the program. If the program calls for READing one item at a time, the pointer will be moved over one item each time the READ statement is encountered. The computer, however, will do this pointer-moving even when the item read is the LAST one in the DATA line, so that the pointer eventually will be indicating an empty space. This undesired event will result in your program coming to a grinding halt with an "'Out-of-Data' error" message. You can avoid this by the use of "dummy data", an item (or items, if you are READing more than one at a time) at the end of the DATA line which will not duplicate any of the real data. In this case, since we are generating two-digit numbers, we can be sure that '999' will never be in our real list, and we can safely use it for the "end-of-data" marker. But we still need to have the computer check to see if it has read the E-O-D marker, and that will require a decision.

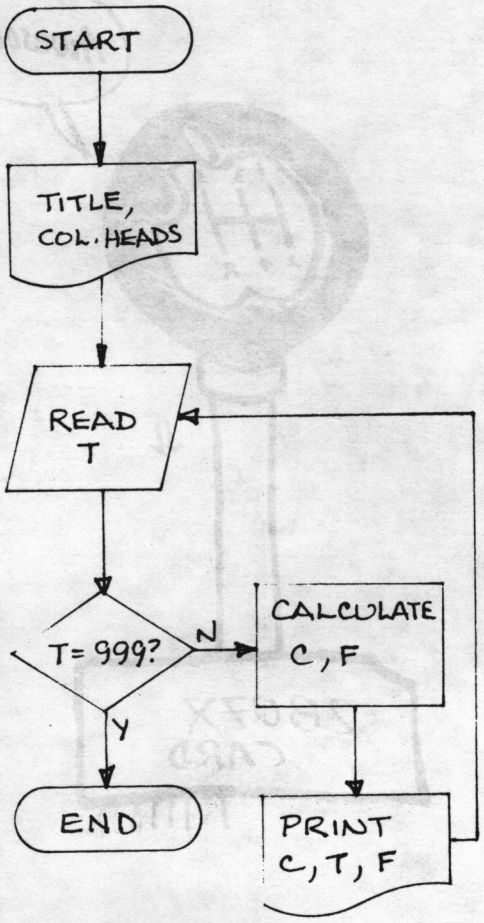


Convention says that if the answer to the IF-THEN statement is Yes/True, the logic flow continues in a straight line; if the answer is No/False, you branch to another line. That is the reason that the 'Y' and 'N' are placed as they are. GOTO does not have a symbol in flow-charting but it merely a line showing the direction of flow.

Obviously, we must also start and END the program, so we will need those symbols as well.



Now, all you have to do it to put the symbols in the appropriate order. If you are like my students in school, you will all get the first one right! After that, almost any order will work (for a while) but if you want the output to be exactly as requested, you need to have the flow-chart appear as follows:



Some of the students wanted to put the decision point after printing out the results, but of course that will cause an additional line with results which did not come from a two-digit starting number. Some have the GOTO return to the column headers or even the title, which results in a repeat of each of those lines as well as the new numerical information. When you have a flow-chart written down, then "play computer" to make sure it's the way you want. Then, and only then, should you try to code the program. As far as the format goes, we can use the comma to space the numbers into the three zones on the Apple screen (colums starting at 1,17, and 32) which will work, but may not be as esthetically pleasing as using TAB statements (see this column, Nov.-Dec. 1982). If you've given it a try, compare yours with mine and pick whichever you like better.

```
10 PRINT "CELSIUS-FAHRENHEIT CONVERSION TABLE"
20 PRINT
30 PRINT "C";TAB(16);"F/C";TAB(23);"F"
40 PRINT:PRINT
50 READ T:REM This could be N for Number
              or T for Temperature or
              T for Temporary or X for
              .... but you get the idea
60 IF T = 999 THEN END
70 F = (9/5)*T + 32
80 C = (5/9)*(T - 32)
90 PRINT C;TAB(16);T;TAB(23);F
100 GOTO 50
110 DATA 34, 42, 25, 56, 60, 08, 87, 71, 999
```

Along with the poker game, I will try to have the column on sorting ready for next month. Until then, Cheerful Computing!!

ANNOUNCEMENT!!!

John Uhley will be offering a class in nibble-counting. It will be given at the Main Computer Center, 50 El Camino Dr. in Corte Madera. The class will be given on five Saturday afternoons, May 14, 21, 28, June 4 and 11, from 2-4 p.m. There will be a charge of $85.00 for the course. For further information, call John at (415) 461-7626.

MARKETING DEPARTMENT NOTES

by

Don Scellato

The Club Librarian and the Marketing Department have been working hard to provide new Public Domain software to the membership. The SFAC 1983 Disk No. 1 just missed being released in time for the Swap Meet in February due to technical problems. It contains three programs. These programs are The Incredible Shrinking Man text/graphics adventure, Gallery (a graphics display program), and a High Score Tabulator for keeping track of your progress in any computer game or arcade game.

In late February, Gary Knox contributed a terrific program called The Worksheet Consolidator which allows the user to add several Visicalc DIF files together into a master worksheet, to multiply a worksheet or number of worksheets by any multiplier such as 2 or .50, a report generator which reads a specific row from a number of DIF Files on a disk on a single pass and enter this data onto a master worksheet complete with messages and labels, and the same utility for columns. This program is well documented and runs exceptionally well. It has been included with a number of other Visicalc utility programs on The SFAC Visicalc Utility Disk. This disk was available at The West Coast Computer Faire and will be available from mail order and at meetings.

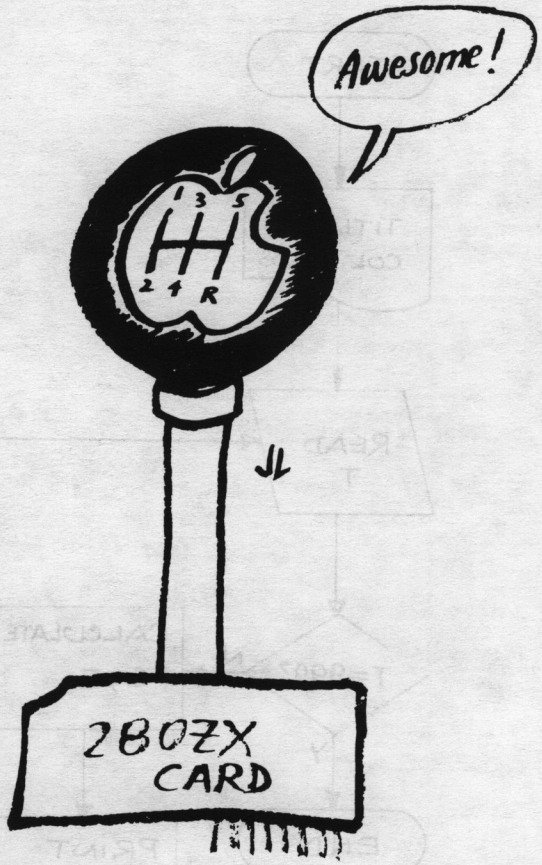
A number of new disks and disk sets were also completed in time for the West Coast Computer Faire. These disks and sets include a 1983 Programming Utility Disk containing programs from the Libraries not assembled on a single disk before; a 1983 Game Set (2 Disks) containing a variety of games from the Library not assembled on game disks before; a Home Applications Set (2 Disks) - one from the old Home Pak and one containing new programs for use at home; and a Education Applications Set (2 Disks) combining a collection of programs from the old Home Pak with a few new programs and the Grammar Quest disk. You can order these new products by mail order or can purchase them at the next meeting. If you would like to see the documentation prior to buying, call the Clubhouse or request it by mail. We would be pleased to provide such documentation as we have to you.

WEST COAST COMPUTER FAIRE

The Marketing Director, the Board of Directors, and the Membership of the Club would like to thank the people listed below for the hard work and time they so generously gave to the Club in working at the San Francisco Apple Core booth at The West Coast Computer Faire on March 18, 19, and 20. Each person listed below spent about four hours on his feet at the booth answering questions, helping people, signing p new members, selling Club product, and otherwise representing the Club to the general public. Most of them also gave up a Saturday morning to receive a briefing on what to do and how to do it at the booth.

These enthusiastic, energetic, and helpful volunteers were Ben Lai, Mike Fischer, Phil Bernheim, Al Miller, Jerry Peterson, Reed Harris, Alan Woods, Ken Ackles, Gary Knox, Larry Nebron, Christopher Chung, Shirley Lee Poo, Stan Gudero, Susan Matsukado, Jerry Matsukado, Robert Michaud, Joyce Conklin, Stewart Morgan, David Om, Jeff Menscher, Stan Dinsmore, Arlene Strick, Sami Capron, and Jonathon Sass. Alan Smerican was present to lend his help with membership questions and to answer questions about Club activities. Susan Nyman once more prepared the signs which told people about the SFAC and listed the product being sold. They were excellently done!! Joe Bianco who ably and cheerfully runs the Sales Table for all of us at general meetings deserves a special measure of thanks for sharing the running of the booth with me. He gave up a minimum of four hours per day during the Faire and was there to help with assembling product before the Faire and to help with booth breakdown afterward. Thanks Joe. Keep up the good work.

Once more, Thanks to all of you for your help at the Faire.



APPLE CORE OFFERINGS

NOTES

SFAC 1983 DISK NUMBER 1 contains only three programs due to the nature of one of the programs - a hi-res graphics game. This game is called "The Incredible Shrinking Man" which was contributed by the Chiang Brothers. Also included on the disk is a High Score Tabulator and hi-res graphics display program called Gallery.

LIBRARY #1 contains over 340 programs. It is packaged in diskette holders and is bound in a SF Apple Core binder with over 30 pages of documentation. This documentation alone is available for three dollars.

LIBRARY #2 continues the tradition started with Library #1. It contains over 250 programs from the 1980 DOMs.

1981 YEARBOOK contains 12 disks containing all DOM programs from 1981. There is a heavy emphasis on games and business applications.

1983 PROGRAMMING UTILITIES contains a collection of utilities not collected on a single disk before. These utilities come from a variety ofsources such as IAC disks, 1981 DOMs, and 1982 DOMs.

1983 GAME SET consists of two disks containing games not collected in a single set before. It contains a variety of hi-res, lo-res, and text games.

1983 EDUCATION APPLICATIONS is a set of two disks containing interactive learning programs, a grade maintenance program, and GRAMMAR QUEST an interactive learning game.

1983 HOME APPLICATIONS consists of two disks of programs useful around the home. One disk was from the 1982 Home Pak. The second disk is a collection of programs gathered from IAC disks and other recent contributions.

PRODUCT	MTG	MAIL
Library #1	98.00	101.50
Library #2	98.00	101.50
1981 Yearbook	98.00	101.50
DOMs		
Mar 82	5.00	7.00
Apr 82	5.00	7.00
May 82	5.00	7.00
COLLECTIONS		
Basic Tutor Pak(3)	20.00	22.00
Forth Pak (3)	20.00	22.00
Game Set (2)	15.00	17.00
Home Applications(2)	15.00	17.00
Education Applic.(2)	15.00	17.00
1983 Prog Util.(1)	10.00	12.00
SFAC Visicalc Temp(1)	10.00	12.00
1983 Visicalc Util(1)	18.00	22.00

All foreign orders: Add 25% to above prices.

Instructions: The easiest way to get these products is to visit the 'sales table' during any General Meeting. Otherwise, circle the items you wish to purchase, place this sheet into an envelope with check or money order (DO NOT send cash!) to:

San Francisco Apple Core, Inc.
1515 Sloat Blvd., Suite #2
San Francisco, CA 94132
Attn:Marketing Dept.

HARD CIDER

THE HARDWARE SIDE

TO PLAY OR NOT TO PLAY
by Jerry White

To preface the reason for this article, let me say that I have owned my APPLE II for about 4 years and am probably missing some of the modifications and improvements in the APPLE.

At the Applefest, held in San Francisco last yar, I finally decided to purchase the "Mountain Computer Music System" boards.

Within a short time after installing the boards and running the program I began to experience a major problem.

After being in the "Music Editor" mode and deciding that I was ready to her what I had input (by going to the "Music Payer" mode) I would get an error message "Music Board Not in Machine". Needless tosay, this meant disaster because I would then have to turn off the power and recheck the cards in the slots. To be sure the trouble was not in the slots I tried moving the crds to different slots (remembering of course that both cards have to be inserted in slots side by side). This would work find for a while and then the same problem would occur again.

Not wanting to spend any more time on the problem - several hours was enough - I decided to call MOUNTAIN COMPUTER to see if they had any ideas. The first thing I found out is that they have Customer Support number (408-438-4933) which, if nobody is able to answer within so many rings, will transfer you to a recording telling you to leave your name and number or if you hear a tone after the recordng you can wait on the line and someone will get to you when they can. (A couple of times this took 10 minutes).

Getting back to the main problem, I was told that because there was a possiblity of the computer generating noise that the boards were shutting themselves off. The solution was a DMA Reducer being installed on the motherboard. This was nothing more than a 100 pf capacitor being installed between pin 1 and 7 of the 74LS08 IC at location B11. (Page 90 of the APPLE II REFERNCE MANUAL makes reference to the DMA cycle and if you look on the schematic you'll find that pin 1 of the 74LS08 goes to the DMA lead of the Peripheral Connector). I was told tht it would be an easy job for me to do but if I didn't want to try it that they would send me a replacement chip with the capacitor mounted on it.

Several weeks later I received a package with the IC chip and a note reminding me where to install it. Also in the notice was a statement to "Install the enclosed component at location B11 of the APPLE motherboard to correct any of the following:

> Repeated interruption of MusicSystem output (middle of the song, etc.) and computer hangs.
>
> Intermittent ability to boot the MusicSystem diskette.
>
> Problems loading or running programs when the MusicSystem cards are installed in the APPLE.
>
> A disk drive boot sound as if the drive is running slowly (the drive makes strange noises, etc.)
>
> MusicSystem is installed in the APPLE but message **ERROR** MUSIC BOARD NOT IN MACHIN PRESS SPACE BAR WHEN READY is displayed.

Maybe nobody else will eperience the same trouble, but if they do maybe my experience will help them.

MAKING DISK DRIVES MOBILE
by Max J. Nareff

Tired of the inconvenience of drives with short cables which limit positioning and mobility? A handy, easily-attached, 22" cable with appropriate connectors, "The Disk Jumper" (TM) is available from the AbCom Corporation, P.O. Box 5203, Mission Hills, CA 91345. Price is a reasonable $22.95 + tax.

The cable attaches to the controller card at one end and to the connector-end of the short drive cable. The drive can then readily be detached from the computer without access to the card. Not only does this permit greated ease and range of position, but for those who move their computers, this ia a major convenience. A Velcro (TM) patch is included for stowing the cable during transit.

The company provides other useful items, including very reasonably priced and practical carrying cases for the APPLE, as well as for the Epson printer, and dust covers.

REVIEWS

S.A.M. - Speech for the Apple][
Review (C) 1983 by Michael Fischer

Speech on the Apple][has been around for a long time. The early programs produced barely recognizable speech played through the Apple built-in speaker.

S.A.M. (for Software Automatic Mouth) is one of the new breed of speech synthesizers. It produces acceptable speech when you feed it a code, or it can convert written English to speech.

S.A.M. is basically a software speech synthesizer. The main program occupies about 9K of memory, sitting just under DOS. In addition, S.A.M. comes with a small digital to analog board which plugs into any of slots 1-7 (slot 4 is recommended). This board feeds S.A.M.'s speech to an external speaker. It can also feed internal speaker sound to the same external speaker as well as do analog sound output based on values poked into its output port.

The main S.A.M. program takes input from an Applesoft string called SA$. You merely set SA$ to the proper phonetic codes, CALL 38128 and S.A.M. speaks. (The routine can also be used from Assembly language.)

If putting speech into phonetic codes terrifies you, S.A.M. has a solution. The program Reciter takes written English and, using about 450 rules, converts each word to phonetic speech. (This type of program is called a TTS or Text-to-Speech program.)

When using either method of input you have control over S.A.M.'s pitch and speed of speech. In addition, stress can be controlled when using phonetic input. Punctuation serves the function of inserting pauses ("-" for a short pause and "," for a longer one) and showing the end of the sentence ("." for a pause with a falling pitch and "?" for a pause with a rising pitch).

One of the demonstration programs that comes with S.A.M. nearly rises to the level of a utility. It is called Sayit and allows you to enter strings of either words or phonemes to test how they sound. The program also lets you modify pitch and speed at any time.

Three other demonstration programs come on the disk -- one which tells a story, one which recites portions of famous speeches, and one which plays a version of guess the number giving verbal clues instead of written ones.

Performance

I listened to all speech synthesizers displayed at the San Francisco Applefest. Not one of them had a sound that was easily understood. All took some getting used to. The voice of S.A.M. is no better than the others but no worse either. The inflections and accents of each synthesizer vary and in many cases the "better" one is the one that appeals to you. S.A.M.'s accent sounds a bit like the Swedish chef on the Muppet Show. However, after working with it for a while, it is understandable.

The main disadvantage to S.A.M. is also one of its strong selling points. S.A.M. is nearly fully software implemented. (Indeed, the Atari version of the program, which does not require the digital to analog board, is totally software.) This keeps the price low, and will make upgrades easy. However, it does use up memory. S.A.M. occupies some 9400 bytes of memory while the TTS program Reciter takes nearly 6400 bytes. Since S.A.M. loads in just below DOS, if you run both S.A.M. and Reciter you cannot user Hires Graphics page 2. Also, S.A.M. cannot be used from Pascal because of memory location conflicts. And the program cannot be used from Integer Basic without using special, and undocumented, poke routines.

The Reciter program functions quite well. It speaks most English words quite accurately. In some cases misspelling the word helps. The Sayit program works as expected and is an excellent tester of string input. The only two faults are the inability to switch back and forth from text to phonemes and the slightly kludgy way input is handled when changing speed and pitch. The three demonstration programs are uninspired but do show how the product works.

Ease of Use

If you merely want to add speech output to an Applesoft program, S.A.M. is easy to use. You test the text in the Sayit program, enter the text within your program to the string variable SA$, and then Call the proper memory location.

If you want a somewhat higher quality of speech with the ability to control stress, you must switch to phonemes, using phonetic codes. While this is somewhat more difficult to use, all speech synthesizers require phonetic input for high quality speech. S.A.M. makes this somewhat easier in two ways: (1) the availability of the Sayit program to test the phonemes, and (2) the inclusion of a phonetic dictionary containing nearly 1500 words.

There are only two restrictions on using SAM from within your program. You must set HIMEM to 29024 (if using S.A.M. only) or 22688 (if using Reciter as well), and you must use SA$ for S.A.M.'s speech.

The digital to analog board that comes with S.A.M. is designed to go into slot 4. However, if you wish to put the board in some other slot, all you need to do is poke that slot to a location in the S.A.M. program. While people with familiarity about binary file loading and saving under DOS can easily make this change permanent to the S.A.M. program, there are no instructions on how to do this.

Error Handling

S.A.M. handles phonetic spelling errors very well. If S.A.M. finds an error it beeps twice and returns from the Call without speaking. It sets an error location to the character number in SA$ where the error occurred (or to 255 if there was no error). There is even a sample error handling routine in the manual which prints the phonetic string with the location of the error in inverse.

Errors in standard English text are handled more simply. Reciter attempts to translate whatever is sent to it but it only recognizes some of the special characters. It translates all it recognizes and ignores, without warning, those it does not.

S.A.M. can speak for 2.5 seconds without taking a break. For strings which take longer than 2.5 seconds, S.A.M. inserts breaks where needed, using punctuation marks for the initial decisions and spaces between words for other needed breaks. One difficulty, which rarely occurs, is an unbroken word which takes more than 2.5 seconds to speak. In that case S.A.M. merely refuses to say the word without indicating an error condition. It would be preferable to have the error flag show the word which is too long. The Reciter program, on the other hand, makes some crazy sounds when presented with a word that is too long to speak.

Documentation

The documentation is, for the most part, clearly written. It covers much of the information needed by a user of the program. (An exception, already noted, is how to save a slot modified version of the program.) The dictionary of phonetic spelling is also a nice addition.

The documentation suffers somewhat from poor organization. Various items of important information, which may have to be accessed regularly with use of the program, are scattered throughout the manual. For example, the materials on important program addresses are separated from the pitch and speed control numbers, which are both separated from the phonetic alphabet chart. A nice feature, however, is the separate phonetic alphabet reference card.

Support

The program comes on an unprotected disk. Both the disk medium and the hardware board are covered by a 90 day warranty. After 90 days the disk will be replaced for $5.00 and the board for $15.00. Not only is the disk replacement cost quite low, the low cost of the hardware replacement board is nearly unbelievable.

A run time version of the speech synthesizer program is apparently available for licensing for programs you develop. (It was not clear whether this was only available for the Atari [all software] version of the program.)

Summary

S.A.M.'s speech output is comparable with other speech synthesizers on the market today. The main question for any potential buyer to consider is the tradeoff between cost and memory usage, as well as the (to most not too onorous) restriction to using Applesoft and Assembler.

S.A.M. [Software Automatic Mouth]
$124.95 from
Don't Ask Computer Software
2265 Westwood Blvd., Suite B-150
Los Angeles, CA 90064

LinkIndex - Pascal Indexed File Utility Review (C) 1983 by Michael A. Fischer

One of the reasons for buying a personal computer is to keep and manage information. There are several different approaches to implement this use.

The first is using a commercial data base management system. Most commercial data base systems, however, were not written with one particular application in mind, and definitely not in the way you or I would be likely to use it. A compromise with the data format is usually required to have the application "fit" the program.

The other approach is to "Do it yourself". While custom coding can create a tailor-made system, the program may run slowly, especially when searching for a record in a large data file or resorting after inserting or deleting data.

Indexed files can provide a ready means for rapid key searches of a data file. Indexed files, however, require a large amount of complex programming. The larger computers usually have this built into the operating system.

LinkIndex, from Link Systems, provides an "add-on" to the Apple Pascal operating system which provides indexed file capability.

One important proviso: This program is very powerful and relatively easy to use if you are at least moderately proficient in Pascal programming and Pascal file handling.

Features: LinkIndex is an Apple Pascal unit called BTree (for Binary Tree) that creates indices for data files. The data files are created and maintained by the application program. The index files are created and maintained by the BTree program.

The Unit defines two Pascal types. The first, called TypeOfKey, permits you to choose between three types of index keys - integer, long integer, or string. The record used to insert the key in the index file consists of the record number for that data record, the key type, and the key itself.

The BTree unit has seven functions, one procedure, and one variable. The functions are all boolean.

CreateBTree creates a new index file. Each index file is given a standard Pascal file name by the application program. The function returns a true value if the file was successfully created and a false value if not. When a false value is returned the unit variable BTreeResult contains a number showing the error type.

OpenBTree is like CreateBTree except is is used on existing index files. In both Open and Create the user can select a slightly slower safety mode of operation which nearly guarantees the integrity of the index file in the event of abnormal termination of the program.

EnterKeyInBTree inserts the particular key record in the index file. The application program selects whether to allow duplicate index keys. The functions returns true if the key was successfully entered and false if not. The opposite function is RemoveKeyFromBTree.

Three search functions are included. In each of them the key record is returned by the function with the record number properly set. KeyInBTree returns true if the key is found and false if not. When the key is not found the function returns the first key in the index file that is greater than the key being searched for or a special flag indicating there is no key greater than the key being searched for.

GetPriorKey and GetNextKey get the prior/-next key in order from the last key. Repeated calls to these routines, then, retrieve keys in descending/ascending order. The function is set false when there is no key less/greater than the last key.

The only procedure among the BTree routines is CloseBTree. If the file is not closed it will result in an unusuable file unless the file was opened in safety mode.

BTreeResult, the only variable in the BTree Unit accessible from the application program, is the BTree equivalent of IORESULT. In fact the return codes 1-64 are the same in IORESULT and BTreeResult. In addition some 13 other error return codes are used by BTree to show what happend on the last call to the BTree unit.

Performance: In any program which provides indexed file capability, speed of performance is a prime consideration. The program claims that any key in a typical 1000 record index file can be found in a maximum of five disk accesses. If greater heap memory usage is selected, the maximum number of disk accesses can be reduced to two.

In normal usage, with user interaction including selecting data records, searching for records, entering new records, and deleting old records, the time used by the BTree program is barely noticeable. Since the program gives you the equivalent of a sorted file, including multiple key sorts, this performance is very acceptable.

Creating an index file from an already existing data file can be a more time consuming process, but one that can be started and run without user interaction. Creating an integer key index on a file of about 2000 records took about 80 minutes using the slower safety mode of operation and keeping the data file and index file on separate drives. Not using the safety mode cut the time to about 65 minutes.

Printing out the records from the data file, in index file order just about keeps up with the speed of a typical home printer (like the Epson MX-80).

The index file, of course, uses up disk space. A typical integer index file with 1000 records uses about 40 blocks while a long integer index or string index of average length of 20 letters uses about 110 blocks.

Ease of Use: This is not a program for the beginner. Its use requires a fair acquaintance with Pascal programming and file handling. However, the program is about as easy to use as can be expected for a powerful and versatile utility. The procedures and functions are well named and understandable. And the program fits in very well with an applications program, requiring very little additional coding to handle the indexing function.

Error Handling: The program functioned as promised. Whenever a function does not perform exactly as expected, because of hardware, program logic, or data file problems, the function returns false and the variable BTreeResult is set to the error code. The error codes are quite understandable and clearly point to the corrective action which is needed.

Documentation: The manual is well written and organized. It follows my "ideal" manual format of an introduction, a hands-on tutorial, a reference manual, and advanced information. It also has an index. Link Systems also includes update documentation in a text file on the program disk which explains new features, manual corrections, and fixed bugs. The level of writing presumes experience with Pascal, but then if you don't have that experience, you can't really use this program.

The documentation suffers from poor print quality because it was printed using a dot matrix printer. The only other problem with the documentation is the lack of a single-card reference guide.

Support: Link Systems is serious about customer support. The documentation update [included as a text file on the Pascal program disk] identified each bug that had been fixed. Also in the update was an expansion of some of the technical information in response to customer inquirites. The disk is not copy protected.

Summary: If you program in Pascal, use data files of any significant size, and want to have indexed file access to your data, this could well be the answer to your needs.

Link Index, $150.00
from Link Systems. Inc.

The Journal of Pascal and ADA
A Review by Max J. Nareff

When APPLE Pascal first appeared, users were aced with a frustrating paucity of text books and magazine literature. Gradually, the former has been rectified but the latter is still desultory and sparse.
Thus, a journal adressing Pascal is most welcome. Eeagerly awaited, the first 1983 issue of "The Journal of Pascal and ADA", Vol.2/No.1 arrived. The 40-page periodical, prepared and published with a very apparent concern for quality and format, immediately aroused an interest for the 4 previous issues (1982). This review is thus based on the complete output of what promises to be a fine contribution to the literature. It will appear bi-monthly at the reasonable price of $14. The progressive improvement in scope and quality of contents is very apparent and is likely to be continued as the interest of both readers and contributors expands.
Directed largely, but not exclusively, at intermediate and experienced users, the magazine will cover computer science and technology and applications. Esoteric and complicated articles will be avoided. The recent exciting debut of Bolition's Modula-2 lanuage fo the APPLE, the first for a microcomputer, will undoubedly make this "Pascal Plus"language another subject to be covered.
The magazine is composed of two main sections. One, "Features", presents articles and algorithms covering graphics, Pascal and ADA. The second, "Departments", includes editorial, readers' forum, new developemtns, book and software reviews, and even a special subsection for the CP/M user. This variety is designed to cover the many diverse aspects of Pascal and ADA insuring maximum reader satisfaction.
Following is a very brief summary of the past and current issues.

May/June 1982 - Algorithms included histograms; uniform number generation; a format program, large and complete; and a tutorial.

July/Aug. 1982 - Hi-res graphics procedures; statistical analyis (Pascal) (continuing series).

Sept./Oct. 1982 - Special report on Modula-2; a typewriter program (Pascal); discussion on program design methods; statistics series (continued).

Nov./Dec. 1982 - Aricles on ADA and modula-2; Pascal Hi-res graphics; Pascal dynamic variables - discussion and programs (an excellent and thorough presentation; one of the best encountered).

Jan./Feb. 1983 - Ppascal graphics program; slide-show tools for the APPLE; removing hidden lines from 3-D plots; Pascal text-formatter; ADA article.

The departments section is eclectic and uniformly excellent. The readers' forum is lively and critical. An exceptionally informative book-review presents an annotated biblography. Software reviews appear to be objective and fair. The new CP/M users column addresses thos using CP/M in the Pascal environment.
One final item; program listing are available free via modem and periodically on diskettes for a nominal charge. Readers are actively encouraged to correspond with the editor. This youn journal deserves the interest and support of all serious students and users. Above all, there is considerable promise of continuing development and sustained quality.

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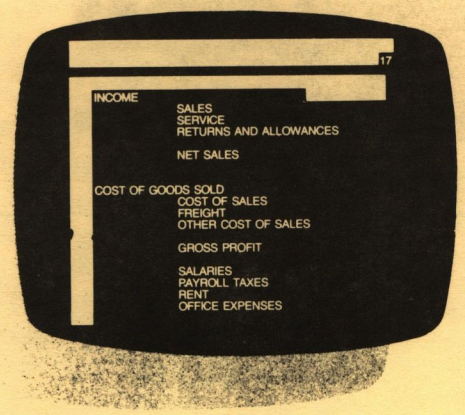

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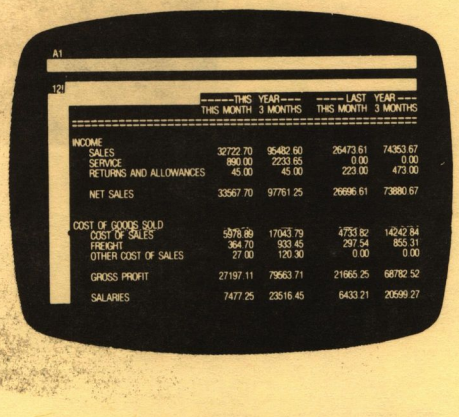

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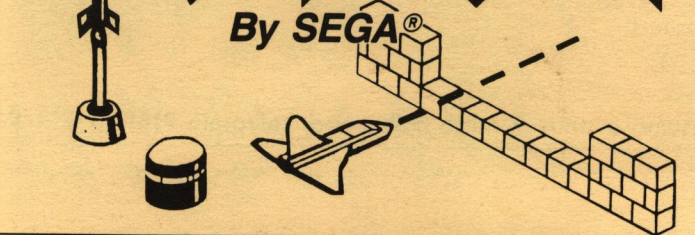

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